

**WAVEFRONT RECONSTRUCTION USING A FOURIER
TRANSFORMATION ALGORITHM**

ABSTRACT OF THE DISCLOSURE

5 The present invention provides methods, systems and software for generating
a wavefront elevation map using Fourier transformation algorithms. In one embodiment, the
present invention provides a method of reconstructing optical tissues of an eye. The method
comprises transmitting an image through the optical tissues of the eye. The surface gradients
from the transmitted image are measured across the optical tissues of the eye. A Fourier
transform algorithm is applied to the surface gradients to reconstruct a surface that
10 corresponds to the optical tissues of the eye.

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